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SHOJI KIYOSHI**(54) MAGNETIC MATERIAL OF LOW-LOSS OXIDE****(57)Abstract:**

**PURPOSE:** To obtain a magnetic material which assures low iron loss even in use at a frequency higher than 200kHz by adding the specified amount of  $\text{Li}_2\text{CO}_3$  to a material including the specified amounts of  $\text{MnO}$ ,  $\text{ZnO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{CaO}$  and  $\text{SiO}_2$ .

**CONSTITUTION:**  $\text{Li}_2\text{CO}_3$  of 0.01W0.04wt% is added to the low-loss oxide magnetic material including, as the main elements,  $\text{MnO}$  of 30W37mol%,  $\text{ZnO}$  of 10W15mol% and  $\text{Fe}_2\text{O}_3$  (remainder) and also including, as the sub-material,  $\text{CaO}$  of 0.04W0.10wt% and  $\text{SiO}_2$  of 0.015W0.100wt%. Thereby, a low-loss oxide magnetic material which sufficiently satisfies various characteristics required for switching power supply material and realizes power loss lower than that of the existing material at a frequency higher than 200kHz can be provided. This material is just suited for magnetic core material for high frequency and realizes reduction in size and light weight of transformer.

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